The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day* via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 2801, at the discharge pump ~~to~~ from the coal pile runoff sump.

PART I
REQUIREMENTS FOR NPDES PERMITS

Internal

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 2901

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) 2901, stormwater from Old Tank Farm (Block 6). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	N/A	N/A
Total Organic Carbon	N/A	N/A	N/A	55 (mg/l)
Oil and Grease	N/A	N/A	N/A	15 (mg/l)
Chloroform	N/A	N/A	Report	0.75 (mg/l)
1,2-Dichloroethane	N/A	N/A	Report	1.50 (mg/l)
Tetrachloroethylene	N/A	N/A	Report	Report

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	1/Day*	Estimate
Total Organic Carbon	1/Day*	Grab
Oil and Grease	1/Day*	Grab
Chloroform**	1/Week*	Grab
1,2-Dichloroethane**	1/Week*	Grab
Tetrachloroethylene**	1/Week*	Grab

* When flowing
** For 2911 and 2951 only by EPA Method 601 or 624

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day* via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 2911; RCl and glycol storage, 2921; MeOH and glycol storage, 2931; Propylene oxide storage, 2941; Butanol storage, 2951; Chlorothene, EDC, glycol and HCl storage, to 005B and Propylene glycol and Dowanol storage area 2961.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 3001

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) 3001, northwest landfill stormwater runoff. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	N/A	N/A
Total Organic Carbon	N/A	N/A	N/A	50 (mg/l)
Oil and Grease	N/A	N/A	N/A	15 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	1/Day*	Estimate
Total Organic Carbon	1/Day*	Grab
Oil and Grease	1/Day*	Grab

* When flowing

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day* via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 3001, at the outlet of the settling basin or pump.

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored ~~1/day/ grab sample~~ N/A.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): ~~155l, storm runoff from Methyl Chloride storage area at northwest portion of Block A~~.

3110 - 1st 3/4" of RAINFALL Impoundment Sump

3121 - Excess Rainfall - uncontaminated

3131 - Discharge from oil storage & Pellet to Pellet Trap.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS ~~1~~ INTERNAL Outfall ~~0001~~ 3100

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) ~~1551, storm runoff from Methyl Chloride storage area~~. Such discharges shall be limited and monitored by the permittee as specified below:

Poly C STORMWATER

Effluent Characteristic	Discharge Limitations kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Total Organic Carbon	N/A	N/A	N/A	55 (mg/l)
Oil and Grease	N/A	N/A	N/A	15 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	~~1/Day*~~ N/A	~~Estimate~~ BASED ON RAINFALL
Total Organic Carbon	~~1/Day*~~ N/A	Grab
Oil and Grease	~~1/Day*~~ N/A	Grab

~~* When flowing~~

"Effluent water leaving the Polyethylene Area 3100 may be discharged without a monitoring schedule provided: 1) the discharge is free of floating solids in other than trace amounts, and 2) it does not exceed 55 mg/l TOC or 15 mg/l oil and grease on a grab sample basis. Any monitoring by the permittee shall be reported for Area 3100 as appropriate on the monthly Discharge Monitoring Report."

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 002

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) 002, stormwater discharge. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	N/A	N/A
Total Organic Carbon	N/A	N/A	N/A	50 (mg/l)
Oil and Grease	N/A	N/A	N/A	15 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	1/Day*	Estimate
Total Organic Carbon	1/Day*	Grab
Oil and Grease	1/Day*	Grab

* When flowing

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day* via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 002, stormwater discharge north of block 49 to Bayou Bourbeaux (No. 1 on August 18, 1983 Map).

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 003

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) 003, firefighting training area. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	N/A	N/A
Total Organic Carbon	N/A	N/A	N/A	50 (mg/l)
Oil and Grease	N/A	N/A	N/A	15 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	1/Day*	Estimate
Total Organic Carbon	1/Day*	Grab
Oil and Grease	1/Day*	Grab

* When flowing

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day* via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 003, stormwater discharge, etc., north and east of Block 49 to Bayou Bourbeaux (No. 2 on August 18, 1983 Map).

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 004

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) 004, stormwater runoff from electrical salvage yard. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	N/A	N/A
Total Organic Carbon	N/A	N/A	N/A	50 (mg/l)
Oil and Grease	N/A	N/A	N/A	15 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	1/Day*	Estimate
Total Organic Carbon	1/Day*	Grab
Oil and Grease	1/Day*	Grab

* When flowing

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day* via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 004, stormwater runoff from electrical salvage yard just east of Block 41 (No. 3 on August 18, 1983 Map).

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 005

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) 005, utility and stormwater runoff from Fab. and Machine shop. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	N/A	N/A
Total Organic Carbon	N/A	N/A	N/A	50 (mg/l)
Oil and Grease	N/A	N/A	N/A	15 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	1/Day*	Estimate
Total Organic Carbon	1/Day*	Grab
Oil and Grease	1/Day*	Grab

* When flowing

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day* via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 005, utility and stormwater runoff from Fab and Machine shop to Bayou Bourbeaux.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 006

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) 006, stormwater runoff from Poly B Plant. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	N/A	N/A
Total Organic Carbon	N/A	N/A	N/A	50 (mg/l)
Oil and Grease	N/A	N/A	N/A	15 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	1/Day*	Estimate
Total Organic Carbon	1/Day*	Grab
Oil and Grease	1/Day*	Grab

* When flowing

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day* via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 006, stormwater runoff from Poly B Plant to Bayou Bourbeaux.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 007

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) 007, stormwater runoff from railcar switching area and spare parts storage. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	N/A	N/A
Total Organic Carbon	N/A	N/A	N/A	50 (mg/l)
Oil and Grease	N/A	N/A	N/A	15 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	1/Day*	Estimate
Total Organic Carbon	1/Day*	Grab
Oil and Grease	1/Day*	Grab

* When flowing

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day* via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 007, stormwater runoff from railcar switching area and spare parts storage to Bayou Bourbeaux (No. 7 on August 18, 1983 Map).

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 008

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) 008, stormwater runoff from Environmental Operations Plant Area (5 point sources). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	N/A	N/A
Total Organic Carbon	N/A	N/A	N/A	50 (mg/l)
Oil and Grease	N/A	N/A	N/A	15 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	1/Day*	Estimate
Total Organic Carbon	1/Day*	Grab
Oil and Grease	1/Day*	Grab

* When flowing

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day* via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 008, stormwater runoff at Environmental Operation Department.

PART II
STANDARD CONDITIONS FOR NPDES PERMITS

SECTION A. GENERAL CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. Penalties for Violations of Permit Conditions

The Clean Water Act provides that any person who violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing sections 301, 302, 306, 307, or 308 of the Clean Water Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than 1 year, or both.

3. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4. Toxic Pollutants

Notwithstanding paragraph A.3. above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the permittee so notified.

The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" section B, paragraph 3.b. and "Upsets" section B, paragraph 4.b., nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the Act.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by section 510 of the Act.

8. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

9. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Bypass of Treatment Facilities

a. Definitions

(1) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs c and d of this section.

c. Notice

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in section D, paragraph 6 (24-hour notice).

d. Prohibition of bypass.

(1) Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(c) The permittee submitted notices as required under paragraph 3.c. of this section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph d.(1). of this section.

5. Upset Conditions

a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph c of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the specific cause(s) of the upset;

(2) The permitted facility was at the time being properly operated; and

(3) The permittee submitted notice of the upset as required in section D, paragraph 6.

(4) The permittee complied with any remedial measures required under section A, paragraph 3.

d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10% from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:

a. "A Guide to Methods and Standards for the Measurement of Water Flow", U. S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 97 pp. (Available from the U. S. Government Printing Office, Washington, D. C. 20402. Order by SD catalog No. C13.10:421).

b. "Water Measurement Manual", U. S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U. S. Government Printing Office, Washington, D. C. 20402. Order by Catalog No. I27.19/2:W29/2, Stock No. S/N 24003-0027).

c. "Flow Measurement in Open Channels and Closed Conduits, U. S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Service (NTIS), Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST).

d. "NPDES Compliance Sampling Manual", U. S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration [8FFS], Centralized Mailing Lists Services, Building 41, Denver Federal Center, Denver, CO 80225).

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

4. Penalties for Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

5. Reporting of Monitoring Results

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form (EPA No. 3320-1). Monitoring results obtained during the previous month shall be summarized and reported on a DMR form postmarked no later than the 15th day of the month following the completed reporting period. The first report is due _____. Duplicate copies of DMR's signed and certified as required by section D, paragraph 11, and all other reports required by Section D. Reporting Requirements, shall be submitted to the Regional Administrator and the State at the following addresses:

Director
Water Management Division (6W)
U.S. Environmental Protection Agency
Region VI
InterFirst Tow Building
1201 Elm Street
Dallas, Texas 75270

J. Dale Givens, Administrator
Assistant Secretary for Water
Water Pollution Control Division
Louisiana Dept. of Environmental Quality
P.O. Box 44066
Baton Rouge, Louisiana 70804-4066

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated.

7. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

8. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

9. Record Contents

Records of monitoring information shall include:

a. The date, exact place, time and methods of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

10. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

This permit is nontransferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

4. Monitoring Reports

Monitoring results shall be reported at the intervals and in the form specified in section C, paragraph 5 (Monitoring).

5. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

6. Twenty Four Hour Reporting

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

The following shall be included as information which must be reported within 24 hours:

a. Any unanticipated bypass which exceeds any effluent limitation in the permit.

b. Any upset which exceeds any effluent limitation in the permit.

c. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part III of the permit to be reported within 24 hours.

7. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under section D, paragraphs 1, 4, 5, and 6, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 6.

8. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

a. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the "notification levels" described in 40 CFR 122.42 (48FR14146 April 1, 1983).

b. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

9. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

10. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

11. Signatory Requirements

All applications, reports or information submitted to the Director shall be signed and certified.

a. All permit applications shall be signed as follows:

(1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(i) A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or

(ii) the mananger of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(i) The chief executive officer of the agency, or

(ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

b. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above.

(2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and

(3) The written authorization is submitted to the Director.

c. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

12. Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.

13. Penalties for Falsification of Reports

The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

PART III
OTHER CONDITIONS

1. The "daily average" concentration means the arithmetic average (weighted by flow value) of all the daily determinations of concentration made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during that calendar day.

   The "daily maximum" concentration means the daily determination of concentration for any calendar day.

2. Noncompliance reporting for upsets and bypasses shall be made within 24 hours to EPA Region 6 followed by a written report in five days. Violations of daily maximum limitations for pollutants listed below will also be reported in 24 hours followed by a written report in five days. Violations of daily maximum limitations for all other pollutants identified elsewhere in this permit shall be reported in writing within five days.

3. The term "24-hour composite sample" except for volatile organics means a sample consisting of a minimum of eight (8) grab samples of effluents collected at regular intervals over a normal operation day and combined proportional to flow, or a sample continuously collected proportional to flow over a normal operating day.

4. The "daily average" mass discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number days during the calendar month when the measurements were made.

   The "daily maximum" mass discharge means the total discharge by weight during any calendar day.

5. pH EFFLUENT LIMITATIONS UNDER CONTINUOUS MONITORING

   Where a permittee continuously measures the pH of wastewater pursuant to a requirement or option in a National Pollutant Discharge Elimination System (NPDES) permit issued pursuant to Section 402 of the Clean Water Act, the permittee shall maintain the pH of such wastewater within the range set forth in the permit, except excursions from the range are permitted, provided:

   (a) The total time during which the pH values are outside the required range of pH values shall not exceed 446 minutes in any calendar month; and

(b) No individual excursion from the range of pH values shall exceed 60 minutes.

For purposes of this section, an "excursion" is an unintentional and temporary incident in which the pH value of discharge wastewater exceeds the range set forth in the permit. Both the number of individual excursions exceeding 60 minutes and the total accumulated excursion time in minutes occurring in any calendar month shall be reported in accordance with Part II.C.5 of this permit.

6. The permittee shall determine if eighty (80) percent or greater of the culture of test organisms will survive by use of the "Range-Finding Screening Test," set out in "Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms," EPA-600/4-78-012 (Rev. July, 1978). Organisms for this test shall be Daphnia sp. if the effluent is less than five (5) parts per thousand salinity or Mysidopsis sp. if the effluent is equal to or greater than five (5) parts per thousand salinity. This screening test will be conducted within sixty (60) days of effectiveness of the biomonitoring requirements. Tests will be conducted once each quarter for a duration of two years utilizing a static method for 24 hours and following this dilution scheme only:

Effluent sample* - 100 percent by volume
Dilution water - 0 percent by volume

*24-hour composite; refrigerated after collection

If at any time during the two year testing period a test shows a survival of eighty (80) percent or less of the test organisms, the permittee shall within twenty-four (24) hours conduct a replacement static 48-hour median lethal concentration (LC50) test on the originally collected sample. Replacement of effluent samples shall be once per 24 hours. Organisms for this test shall be Daphnia sp. if the effluent is less than five (5) parts per thousand salinity and reconstituted fresh water (EPA-600/4-78-012 Section 4) shall be used for dilution. If the effluent is equal to or greater than five (5) parts per thousands salinity, Mysidopsis sp. shall be used as the test organism, and reconstituted seawater will be used as dilution water (EPA-600/4-78-012 Section 4). The remaining LC50 methodology is available in EPA-600/4-78-012.

All screening and LC50 test results shall be reported with the Discharge Monitoring Reports. The test results should include the chemical and physical data as specified in Section 7 of EPA-600/4-78-012.

7. For "24-hour composite sample" of volatile organics, the permittee shall manually collect at least four (4) aliquots or grab samples at regular intervals during the actual hours of discharge during a 24-hour period. The aliquots must be combined in the laboratory prior to analysis. Only one (1) analysis or run is required since the aliquots are combined prior to analysis. Grab samples composited for volatile organic analysis need not be flow proportioned.

8. The permittee may utilize EPA Method 624 in lieu of EPA Methods 601, 602, 604, etc. provided the sampling protocol is no less rigid than that provided in the quantitative method.

9. Monitoring for total purgeable halocarbons, total purgeable aromatics and phenols is required at the 1/month frequency in Part I.A. Should such routine analysis indicate a 25% exceedance of the combined daily maximum requirements upstream, permittee will provide a report of remedial action employed.

   In the event of a major spill of a component of this subject pollutant, the final outfall will be monitored by grab sample to assess the impact. The results of such grab sample will not be reported on the DMR's but should accompany the non-compliance report of the spill.

10. Stormwater leaving the polyethylene areas 900, ~~and~~ 1000, and 3100 may be discharged without monitoring schedule provided: 1) the discharge is free of floating solids in other than trace amounts, 2) does not exceed 55 mg/l TOC nor 15 mg/l Oil and Grease on a grab sample basis. Any monitoring by permittee shall be reported for outfalls 0981, ~~and~~ 1031, 3114, 3121 & 3131 as appropriate on the monthly Discharge Monitoring Reports.

11. Upon notification by permittee that cooling tower systems are being cleaned, renovated and the water treated at Outfall 801, the chromium and zinc limitations will apply at the treatment system to accomodate such increased flow.

12. Permittee shall report on a quarterly basis in accordance with Part I.C.2. of the permit, the monthly average of the daily amount and kind(s) of clarifying agent(s) used in the intake water treatment system.

13. In situaions where pH of an internal outfall will be deterent to effective biomonitoring tests, pH adjustment may be necessary. The 24-hour composite sample of the following internal sampling points may utilize the pH adjustment methodology below:

    Internal Outfall(s) 0311, 0321, 0511, 0521, 0611

    pH adjustment method. Upon completion of the 24-hour composite sample, the pH of the biomonitoring sample may be adjusted to the 6.0 - 9.0 range. Actual pH adjustment will utilize either 1 normal hydrochloric acid for alkaline samples or 1 normal sodium hydroxide for acidic samples. Permittee shall report the quantity (volume) of the above acid or base used to adjust the pH of the biomonitoring sample and the initial and final volume of the composite sample collected for the test(s).

14. Permittee may combine the by-product alkalinity streams from LHL II, 0731 and LHL III, 2211 after completion of the monitoring point installation in the header to transport these streams to the solvents plant area. Permittee must notify EPA and LDEQ of the exact location and that they are able to meet the limitations at 2101.

15. Best Management Practices:

    a. Outfall 1201 - Permittee will continue the Pollution Control Management procedures set forth in the August 18, 1983 letter from Dow pursuant to Tank Car Cleaning.

    b. Outfall 1601 - Permittee will conform to the BMP committment received dated April 15, 1983 pursuant to discharges at 1601.

16. Permittee may utilize a composite side-stream from each effluent discharge pump for purposes of pH monitoring at 0001. The retention time in the receiver where the pH is actually monitored should not exceed 15 minutes.

(14) If scientific data, studies, references are used to justify this regulation, please submit material with the regulatory package. Please provide full citation and/or links to internet source.

A considerable body of scientific research has been developed by various parties over many years regarding the construction of natural gas wells and, specifically, casing and cementing standards, BOP operation safety, training and groundwater protection. The Department monitors the development and requirements of other states and reviews that research and resulting reports and has taken those efforts under consideration in formulating these proposed regulations. The American Petroleum Institute (API) standards and recommended practices have been updated and are reflected in the proposed regulation. They are available at: http://api-ec.api.org/Standards/

(15) Describe who and how many will be adversely affected by the regulation. How are they affected?

Any person who currently has a well producing natural gas or oil or intends to drill and develop a well with the intention of producing natural gas or oil will be required to comply with the updated standards and practices proposed in these regulations. There are about 74,000 wells across the Commonwealth that are actively producing oil and gas under existing regulatory provisions. The Department anticipates it will permit 7,500 wells in 2010 and projects approximately 7,500 to 9,000 wells in 2011, which must meet the new casing and cementing requirements.

The changes proposed in this rulemaking package reflect the updates needed to the Commonwealth's oil and gas program to bring well construction practices into line to be comparable with other states' requirements. Many of these requirements are already standard construction and operating practices for drilling operations in Pennsylvania.

The proposed regulation further delineates the necessary requirements for designing, constructing and operating oil and gas wells and responding to emergency situations that may be related to their well operations. Most of the updates are codifying existing best management practices that are already being utilized by numerous operators. The proposed regulations are expected to significantly reduce the risk of gas migration. The rulemaking will also minimize the cost to the operator; minimize their liability and the Department's compliance cost by minimizing the potential for a stray gas occurrence. If there is a stray gas situation, the proposed regulations outline the procedures for quickly identifying the source, and expedite remedying the situation.

SECTION III: COST AND IMPACT ANALYSIS

(17) Provide a specific estimate of the costs and/or savings to the regulated community associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.

The Department finds that most migrations issues stem from inadequate cement procedures, cement returns, or combinations of inadequate casing and cementing or over-pressured casing seats. Because the Department is proposing regulations that generally codifying existing industry standards, any increased cost associated with drilling and operating oil and gas well will be minimal. All of the potential increases in cost to an operator will be associated with assuring a well is properly constructed.

The Department is proposing to require an eight hour Wait On Cement (WOC) set time. During the WOC a well driller can not disturb the casing or the cement as it sets. The elimination of any movement of the casing in the cement sheath will allow the cement to achieve a higher compressive strength without excessive accelerators being added to the cement. This will help ensure the cement maintains the integrity necessary to prevent the formation of preferential gas migration pathways in the annulus. The WOC cost is estimated to be about $1,000 because the rig must be idle during this period and can not couple with the casing.

All of the additional measures are proposed to reduce the potential for gas mitigation. If an operator fails to prevent a pollution event of a water supply, the anticipated cost to permanently replace one private water supply would be approximately $30,000 or greater. The cost would only occur if an operator fails to meet a construction requirement.

The operator must install casing that can withstand the effects of tension, and prevent leaks, burst and collapse during its installation, cementing and subsequent drilling and producing operations. The proposed regulations require the casing strings to pass maximum pressure testing. Used casing, welded casing and casing attached to a high pressure blow out preventer must be pressure tested to demonstrate its ability to withstand the highest anticipated working pressures to which the casing will be exposed. If the casing fails this test, the operator must repair or replace the casing and ultimately pass the pressure test. Less than 5% of the casing used is anticipated to fail a pressure test. The cost to repair or replace the defective casing is overwhelmingly outweighed by the environmental damage that would result from a failed string of casing and the fact that the casing would still need to be repaired or replaced. The construction cost for the new casing for a situation when the original casing string failed the pressure test is about $10,000 per well. The Department anticipates approximately 5% of the wells drilled in Pennsylvania will have casing fail the pressure test.

Another potential cost to an operator will be the use of an additional string of casing for situations when the cement is not returned to the surface. The proposed regulations will require an operator to install an additional string of casing past the bottom of the surface or coal protective casing. This requirement helps minimize the potential for stray gas migration. The construction cost for the additional string of casing for situations when the cement is not returned to the surface is about $10,000 per well. Lost circulation of cement happens to approximately 5% of the wells drilled in Pennsylvania.

The proposal includes language requiring operators to survey their wells on quarterly bases. This requirement is proposed to aid in the early detection of potential gas migration issues. This requirement would only add a nominal cost to the operation of a well. Currently, all wells are tended to and this

would only add a few additional items for the operator to inspect.

The potential increase in cost is minor when compared to the overall cost of well construction. The typical cost to develop a Marcellus Shale well is around $5,000,000. The typical cost to develop a shallow gas well is $250,000 and the typical cost to develop an oil well is $200,000. The first two fiscal years the Department anticipates a high compliance cost for operators to review and repair any old wells that may pose a safety hazard.

(18) Provide a specific estimate of the costs and/or savings to **local governments** associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.

The proposed rulemaking has no compliance, legal, accounting, or consulting effects on local governments. Local governments will benefit from this rulemaking because of the decrease incidents of gas migration.

(19) Provide a specific estimate of the costs and/or savings to **state government** associated with the implementation of the regulation, including any legal, accounting, or consulting procedures which may be required. Explain how the dollar estimates were derived.

Current Department expenditures for individual gas migration cases vary considerably, generally ranging from as little as $1000 to over $150,000. Collectively, the components of these cases include isotopic composition analyses, combustible gas monitoring, installation of monitoring points, geophysical testing and logging, installation of alarms, and active or passive venting of impacted sites. The proposed regulations will reduce this cost by streamlining the inspecting, investigating, reporting and litigating of gas migration problems. The overall saving is difficult to estimate because of the uniqueness of each investigation.

(20) In the table below, provide an estimate of the fiscal savings and costs associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

	Current FY Year	FY +1 Year	FY +2 Year	FY +3 Year	FY +4 Year	FY +5 Year
SAVINGS:	$	$	$	$	$	$
Regulated Community	$0	$0	$0	$0	$0	$0
Local Government	$0	$0	$0	$0	$0	$0
State Government	$0	$0	$0	$0	$0	$0
Total Savings	$0	$0	$0	$0	$0	$0
COSTS:						
Regulated Community	$6,300,000	$6,675,000	$3,375,000	$3,375,000	$3,375,000	$3,375,000

Local Government	$0	$0	$0	$0	$0	$0
State Government	$0	$0	$0	$0	$0	$0
Total Costs	$6,300,000	$6,675,000	$3,375,000	$3,375,000	$3,375,000	$3,375,000
REVENUE LOSSES:						
Regulated Community	0	0	0	0	0	0
Local Government	0	0	0	0	0	0
State Government	0	0	0	0	0	0
Total Revenue Losses	0	0	0	0	0	0

(20a) Provide the past three year expenditure history for programs affected by the regulation.

Program	FY -3	FY -2	FY -1	Current FY
Environmental Program Management	$36,868,000	$39,685,000	$37,664,000	$32,694,000
Environmental Protection Operations	$89,847,000	$98,574,000	$98,544,000	$85,069,000
Well Plugging	$746,000	$1,043,000	$950,000	$9,920,000

(21) Explain how the benefits of the regulation outweigh any cost and adverse effects.

The new construction standards and the well retrofit will far outweigh the liability to the operator from loss of life, personal, property and environmental damages that may result without these additional precautions.

Most of the updates are codifying existing best practices of the industry used by prudent operators. The increased cost of constructing the well in time and materials will decrease the risk of gas migrations resulting from defective casing or cementing. As new areas of the Commonwealth are developed for natural gas, these proposed regulations will preemptively abate many potential health, safety and environmental issues.

(22) Describe the communications with and input from the public and any advisory council/group in the development and drafting of the regulation. List the specific persons and/or groups who were involved.

The proposed rulemaking was presented to the Oil and Gas Technical Advisory Board (TAB) for their consideration on September 17, 2009. Due to the scope of the changes, TAB requested additional time to review and provide comment. As part of their review, TAB formed a technical review committee, with representatives from various companies, trade groups and consultants. Since the initial meeting in

September, the Department met with TAB and their subcommittee on October 28, 2009, January 14, 2010, January 21, 2010 and March 25, 2010.

In addition to TAB's input, the Department received additional input from industry representatives, consultants and environmental groups. On January 30, 2010 the Department published an Advanced Notice of Proposed Rulemaking for a 30-day comment period. The Department received comments from 87 individuals representing industry, consultants and environmental groups, as well as private citizens. The current proposal is based on the comments received during the public comment period, comments submitted by TAB and comments developed by TAB's sub-committee members.

(23) Include a description of any alternative regulatory provisions which have been considered and rejected and a statement that the least burdensome acceptable alternative has been selected.

There are no alternative regulatory provisions that achieve the same level of safety, health and environmental protection.

(24) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulations.

No.

(25) How does this regulation compare with those of other states? How will this affect Pennsylvania's ability to compete with other states?

The changes proposed in this rulemaking package reflect the updates needed to the Commonwealth's oil and gas program to bring well construction practices into line to be comparable with what other states and prudent operators implement as best practices. Comparison with the regulatory requirements of EPA as well as those of New York, West Virginia, Ohio, Texas, Oklahoma, Louisiana, Kansas and Montana were made while taking into consideration the differences in those areas with Pennsylvania geology, producing formations and historical practices. A side-by-side comparison with these states indicates that Pennsylvania's proposed cementing and casing standards would be line with those states with similar operations. There is not a comparable regulation for any of the state oil and gas programs reviewed regarding the gas migration response requirements for the operator as proposed by this regulation. Due to the potential risk of harm or death, Pennsylvania has taken the lead on this issue of safety. The Department believes the proposed rulemaking reflects a combination of the best practices of those states as applied to the peculiarities of Pennsylvania geology, producing formations and historical practices of the industry.

(26) Will the regulation affect any other regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

No.

(27) Submit a statement of legal, accounting or consulting procedures and additional reporting,

recordkeeping or other paperwork, including copies of forms or reports, which will be required for implementation of the regulation and an explanation of measures which have been taken to minimize these requirements.

Operators will need to visit each well site to check the status of the annulus and record and report the annular pressure on the annual well production and waste report. Two fields will be added to the current annual production and waste report form for reporting open annulus or wellhead pressure.

(28) Please list any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, elderly, small businesses, and farmers.

Not Applicable

EXHIBIT 2

PROPOSED PERMIT

Permit No. LA0003301
Application No. LA0003301

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Dow Chemical U.S.A.
Louisiana Division
P.O. Box 150
Plaquemine, Louisiana 70764

is authorized to discharge from a facility located at Plaquemine, Louisiana

to receiving waters Mississippi River
Bayou Bourbeaux

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III hereof.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Signed this day of

Myron O. Knudson, P.E.
Director, Water Management Division (6W)

PART I
REQUIREMENTS FOR NPDES PERMITS

Final

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 001

During the period beginning the effective date and lasting through the expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 001, combined process, utility and storm runoff from the Division Return canal system to the Mississippi River.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Temperature, °F	N/A	N/A	Report	Report
Total Residual Chlorine	Report	Report	N/A	N/A
Total Purgeable Halocarbons	Report	Report	N/A	N/A
Total Purgeable Aromatics	Report	Report	N/A	N/A
Phenols	Report	Report	N/A	N/A
Biomonitoring	N/A	N/A	N/A	N/A

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	Continuous	~~Record~~ **
Temperature, °F	Continuous	Record
Total Residual Chlorine	1/Day	Grab
Total Purgeable Halocarbons	1/Month*	24-Hour Composite
Total Purgeable Aromatics	1/Month*	24-Hour Composite
Phenols	1/Month*	24-Hour Composite
Biomonitoring	(See Part III)	24-Hour Composite

*See Part III, 9.

** Calculated based upon number of pumps operating, their design capacity and pump running time.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored continuously and recorded (See Part III).

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 001; the monitoring point for pH shall be in the sampling drum which receives water from all pumps which pump the discharge from the Divison Return Canal System to the Mississippi River. The residence time of water in this sampling drum will reflect the instantaneous pH of the combined flow, i.e., the holdup in the vessel shall be less than 15 minutes.

PART I
REQUIREMENTS FOR NPDES PERMITS

Internal

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 101

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 101, process wastewater from the manufacture of chlorinated polyethylene.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day) Daily Avg	Daily Max	Other Units (Specify) Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Total Oxygen Demand	~~136(300)~~ 544 (1200)	~~272(600)~~ 699 (1540)	N/A	N/A
Total Suspended Solids (TSS)	~~175(385)~~	~~349(770)~~	N/A	N/A
Total Residual Chlorine	Report	Report	N/A	2(mg/l)

Effluent Characteristic	Monitoring Requirements Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	Continuous	Indicate
Total Oxygen Demand	~~Daily~~ 3/week *	24-Hour Composite
Total Suspended Solids (TSS)	~~Daily~~ 3/week *	24-Hour Composite
Total Residual Chlorine	1/Week	Grab

* Noncompliance with a daily average or daily maximum requirement will increase the monitoring frequency to 3/week for four weeks without a noncompliance.

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 101; Southwest corner of block 19, discharge of settling pond.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Internal Outfalls 211 and 221

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 211 - once-through cooling water from methyl cellulose unit, 221 - treated and uncontaminated stormwater.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Net Total Oxygen Demand*	Report	Report	N/A	15 (mg/l)*
Total Oxygen Demand**	N/A	N/A	N/A	200 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	~~Continuous~~ daily	Indicate estimate
Net Total Oxygen Demand	Daily	Grab
TOD	Daily**	~~24-Hour Composite~~ Grab

*Net TOD limit applies to OTCW at 211.
**When 221 is flowing. Report TOD only until December 31, 1984.

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 211, once-through cooling water; 221 treated and uncontaminated storm runoff.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 311

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 311, Chlor-alkali II plant process discharge.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Total Suspended Solids (TSS)	509(1122)	1098(2420)	N/A	N/A
Total Residual Chlorine	7.9(17.4)	13.0(28.6)	N/A	N/A
Total Chromium**	0.23(0.5)	0.45(1.0)	N/A	N/A
Total Copper	4.9(10.8)	12.0(26.4)	N/A	N/A
Total Lead	2.4(5.3)	5.9(13.0)	N/A	N/A
Total Nickel	3.7(8.1)	7.3(21.3)	N/A	N/A
Total Purgeable Halocarbons*	1.3(3)	2.7(6)	N/A	N/A
Biomonitoring	N/A	N/A	N/A	N/A

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	Continuous	Record
Total Suspended Solids (TSS)	1/Day	24-Hour Composite
Total Residual Chlorine	1/Day	Grab
Total Chromium	1/Week	24-Hour Composite
Total Copper	1/Week	24-Hour Composite
Total Lead	1/Week	24-Hour Composite
Total Nickel	1/Week	24-Hour Composite
Total Purgeable Halocarbons*	1/Week	24-Hour Composite
Biomonitoring	(See Part III)	24-Hour Composite

* EPA Method 601 or 624
** At CTBD

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 311, chlor-alkali plant 24" parshall flume.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 321

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 321, Chlorine plant.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Total Suspended Solids (TSS)	921(2030)	1986(4378)	N/A	N/A
Total Residual Chlorine	14.2(31.4)	23.4(51.7)	N/A	N/A
Total Copper	8.8(19.5)	21.7(47.8)	N/A	N/A
Total Lead	4.3(9.6)	10.7(23.5)	N/A	N/A
Total Nickel	6.7(14.7)	17.5(38.6)	N/A	N/A
Total Purgeable Halocarbons*	2.3(5)	4.6(10)	N/A	N/A
Biomonitoring	N/A	N/A	N/A	N/A

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	Continuous	Record
Total Suspended Solids (TSS)	1/Day	24-Hour Composite
Total Residual Chlorine	1/Day	Grab
Total Copper	1/Week	24-Hour Composite
Total Lead	1/Week	24-Hour Composite
Total Nickel	1/Week	24-Hour Composite
Total Purgeable Halocarbons*	1/Week	24-Hour Composite
Biomonitoring	(See Part III)	24-hr. composite

* EPA Method 601 or 624

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 321, chlorine plant discharge at 36" Trench concrete — except for TSS

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 331,341, 351,361,371

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) 331,341,351,361,371; Once-through cooling water and storm runoff. ^ Condensate

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Net Total Oxygen Demand*	Report	Report	N/A	5(mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	Continuous	Record
Net Total Oxygen Demand	1/Day	Grab

* Each outfall

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

331; 24" parshall flume
341, 36" flume
351, 10' flume
361, earthen trench
371, 20" pipe.

PART I
REQUIREMENTS FOR NPDES PERMITS

Internal

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfalls 411 and 421

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 411 and 421 (once-through cooling water) from propylene oxide and intermediates.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Net Total Oxygen Demand	N/A	N/A	Report	15(mg/l)
1,2-Dichloropropane*	Report	Report	N/A	200(ug/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	~~Calculated~~ 1/Day	Estimate
Net Total Oxygen Demand	1/Day	24-Hour Composite
1,2-Dichloropropane	1/Week	24-Hour Composite

*EPA Method 601 or 624

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored ~~1/day via grab sample.~~ N/A

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 411, once-through cooling water at "old" 004-1; 421, once-through cooling water at "old" 004-2.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Internal Outfall(s) 431, 441, and 451.

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 431, stormwater impoundment; 441, emergency stormwater overflow and 451, once-through cooling and rain water (air system) from Glycol I area.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Total Oxygen Demand	Report	Report	N/A	200 (mg/l)
1,2-Dichloropropane	Report	Report	N/A	200 (ug/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	1/Day*	Estimate
Total Oxygen Demand	1/Day*	Grab
1,2-Dichloropropane**	1/Week*	Grab

*When flowing
**EPA Method 601 or 624

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored N/A.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 431, rain water impoundment to effluent canal; 441, emergency overflow from Glycol I area and 451, once-through cooling and rain water (air system) at "old" 004-3 in the Glycol I area.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall(s) Sum of 511 and 521.

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) sum of 511 and 521 - process wastewater from the manufacture of chlorinated solvents and Vinyl I areas, and utility and stormwater
Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day) Daily Avg	kg/day(lbs/day) Daily Max	Other Units (Specify) Daily Avg	Other Units (Specify) Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Total Residual Chlorine **	~~7.7(17)~~ report	15.4(34) report	~~N/A~~ 1(mg/l)	~~N/A~~ 2(mg/l)
~~Total Nickel~~	~~2.8(6.3)~~	~~5.7(12.6)~~	~~N/A~~	~~N/A~~
Total Purgeable Halocarbons*	~~14.5(32)~~ 23(51)	~~29.0(64)~~ 46(102)	N/A	N/A
Biomonitoring	N/A	N/A	N/A	N/A

Effluent Characteristic	Monitoring Requirements Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	Continuous	Record
Total Residual Chlorine **	1/Day	24-Hour Composite
~~total Nickel~~	~~1/Week~~	~~24-Hour Composite~~
Total Purgeable Halocarbons	1/Day	24-Hour Composite
Biomonitoring	(See Part III)	24-Hour Composite

*EPA Method 601 or 624

**Outfall 511 contains purgeable halocarbons and total residual chlorine from Vinyl I, outfall 601. The above limits apply after the values from outfall 601 are subtracted from outfall 511.

** Monitored at the air cinerator discharge at the Solvents and Vinyl I chlorine vent scrubbers and area prior to commingling with any other stream, See Part III.

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 511; contact river water from steam stripper; 521, contact process wastewater.

511 (formerly 005A) process, cooling and scrubber water; 521 (formerly 005B) scrubber and stormwater from solvents manufacturing area.

Part III : The chlorine sources at the Solvents and Vinyl I areas may be combined and treated for a single source. The concentration limit may be converted to a mass limit after sufficient data is established and upon permittee's request in writing.

Permittee shall report the locations of all chlorine vent scrubbers and treatment plans within 30 days of the effective date of this permit.

Dow Chlorine Sources

April 15:

Cl_2 Vent Scrubber
to 001
0031, C+D
004
005 B
006
015
017
020

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfalls 501, 531,541

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 501, 531,541 - Non-contact river water and uncontaminated storm runoff from chlorinated solvents plant.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Net Total Oxygen Demand	N/A	N/A	N/A	5(mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	Continuous	Estimate
Net Total Oxygen Demand	1/Day	Grab

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

501; non-contact river water plus incinerator scrubber water.
531, non-contact once-through river water.
541, non-contact river water plus stripped stormwater.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Outfall 601

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 601, process wastewater from EDC/VCM and once-through cooling water.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Net Total Oxygen Demand*	N/A	N/A	Report	Report
Total Purgeable Halocarbons**	8.6(19)	17.2(38)	N/A	N/A
Total Residual Chlorine	7.7(17)	15.4(34)	N/A	N/A
Biomonitoring	N/A	N/A	N/A	N/A

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	Continuous	Record
Net Total Oxygen Demand*	1/Day	24-Hour Composite
Total Purgeable Halocarbons	1/Day	24-Hour Composite
Total Residual Chlorine	1/Day	24-Hour Composite
Biomonitoring	(See Part III)	24-Hour Composite

* At OTCW streams 0621, 0631 and 0641.
** EPA Method 601 or 624.

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 601 final combined discharge of process, utility and storm drainage from the Vinyl I area. Located at "old" 006 sampling point at the southwest corner Block 17.

Net TOD to be monitored at 0611 approximately 17 MGD, 0621 approximately 10 MGD, 0631 approximately 17 MGD and 0641 at a location just prior to entering the return canal.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Area 700

During the period beginning effective date and lasting through expiration the permittee is authorized to discharge from Outfall(s) serial number(s) 0711 Once-through cooling water from Light Hydrocarbons II.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(M	N/A	N/A	Report	Report
Net Total Oxygen Demand	N/A	N/A	N/A	5(mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	Continuous	Estimate
Net Total Oxygen Demand	1/Day	Grab

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 0711; once-through cooling water at former 007 B sample point.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Interim Outfall 0721

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 0721, treated contact process wastewater from Light Hydrocarbons ~~I and~~ II.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			
	kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Total Suspended Solids (TSS)	~~32(71)~~ 41(90)	~~64(142)~~ 91(200)	N/A	N/A
Biochemical Oxygen Demand (BOD_5)	Report	Report	42 (mg/l)	106 (mg/l)
Total Oxygen Demand	227 ~~N/A(500)~~	~~454 N/A(1000)~~	~~200 (mg/l)~~	~~400 (mg/l)~~
Oil and Grease	11.3 ~~N/A(25)~~	17.2 ~~N/A~~ 68)	~~10 (mg/l)~~	~~15 (mg/l)~~
~~Benzene~~ total purgeable aromatics	0.5 .02(.05)	(1.0) .04(.09)	(1.7) 0.4 (mg/l)	0.65 (mg/l)
Phenol	~~N/A report~~	~~N/A report~~	~~0.5 (mg/l)~~	~~1.0 (mg/l)~~
~~Toluene Ethylbenzene~~ acenaphthalene	N/A	N/A	N/A	0.05 (mg/l)
Flourene	N/A	N/A	N/A	0.05 (mg/l)
Napthalene	N/A	N/A	.5 (mg/l)	1.0 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement	Sample
Flow-m^3/Day(MGD)	Continuous	Record
Total Suspended Solids (TSS)	1/Week	24-Hour Composite
Biochemical Oxygen Demand (BOD_5)	1/Week	24-Hour Composite
Total Oxygen Demand	1/Week	24-Hour Composite
Oil and Grease	1/Week	Grab
Total Purgeable Aromatics	1/Week	24-Hour Composite
Phenol	1/Week	24-Hour Composite
Acenaphthalene	1/Week	24-Hour Composite
Fluorene	1/Week	24-Hour Composite
Naphthalene	1/Week	24-Hour Composite

*EPA Method 602 or 624

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): outfalls 0721, treated contact water from LHC II at "old" sample point 007.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Internal Outfall 0731

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 0731 - By-product alkalinity from Light Hydrocarbon ~~Il~~ See Part III.14.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day) Daily Avg	Daily Max	Other Units (specify) Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Total Oxygen Demand	N/A	N/A	200 (mg/l)	400 (mg/l)
Total Suspended Solids (TSS)	N/A	N/A	55 (mg/l)	110 (mg/l)
Total Phenols*	N/A	N/A	0.1 (mg/l)	0.2 (mg/l)
Total Purgeable Aromatics*	N/A	N/A	0.2 (mg/l)	0.35 (mg/l)
Naphthalene	N/A	N/A	0.05 (mg/l)	0.1 (mg/l)
~~Total Copper~~	~~N/A~~	~~N/A~~	~~0.3 (mg/l)~~	~~0.6 (mg/l)~~
~~Total Lead~~	~~N/A~~	~~N/A~~	~~0.15 (mg/l)~~	~~0.3 (mg/l)~~
~~Total Nickel~~	~~N/A~~	~~N/A~~	~~0.3 (mg/l)~~	~~0.6 (mg/l)~~
Oil and Grease	N/A	N/A	10 (mg/l)	15 (mg/l)

Effluent Characteristic	Monitoring Requirements Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	Continuous	Record
Total Oxygen Demand	1/Week	24-Hour Composite
Total Suspended Solids (TSS)	1/Week	24-Hour Composite
Total Phenols	1/Day	24-Hour Composite
Total Purgeable Aromatics	1/Day	24-Hour Composite
Naphthalene	1/Week	24-Hour Composite
~~Total Copper~~	~~1/Week~~	~~24-Hour Composite~~
~~Total Lead~~	~~1/Week~~	~~24-Hour Composite~~
~~Total Nickel~~	~~1/Week~~	~~24-Hour Composite~~
Oil and Grease	3/Week	Grab

* EPA Method 602, 604, 610 or 624

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): outfall 0731, by-product alkalinity from new benzene removal treatment system.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Internal Outfall 741

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall(s) serial number(s) 741, wastewater and storm runoff. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day)		Other Units (Specify)	
	Daily Avg	Daily Max	Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Total Organic Carbon	N/A	N/A	N/A	50 (mg/l)
Oil and Grease	N/A	N/A	N/A	15 (mg/l)
Total Phenols*	N/A	N/A	0.1 (mg/l)	0.2 (mg/l)
Total Purgeable Aromatics*	N/A	N/A	0.2 (mg/l)	0.35 (mg/l)

Effluent Characteristic	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	1/month ~~Continuous~~	~~Record~~ estimate
Total Organic Carbon	1/~~3~~/Week	Grab
Oil and Grease	1/~~3~~/Week	Grab
Total Phenols	1/~~3~~/Week	Grab
Total Purgeable Aromatics*	1/~~3~~/Week	Grab

* EPA Method 602, ~~624~~ or 624, 609

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored ~~1/day~~ N/A via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 1741, wastewater and storm runoff discharged to effluent discharge canal.

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Internal Outfall 800

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 811 - rainfall runoff and cooling tower blowdown from Glycol II and intermediates and 821 water softener system discharge.

Such discharges, shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day) Daily Avg	Daily Max	Other Units (mg/l) Daily Avg	Daily Max
Flow-m^3/Day(MGD)**	N/A	N/A	Report	Report
Total Chromium*	0.45(1.0)	0.91(2.0)	0.5 (mg/l)	1.0 (mg/l)
Total Zinc*	0.91(2.0)	1.8(4.0)	1.0 (mg/l)	2.0 (mg/l)
Total ~~Biochemical~~ Oxygen Demand (~~BOD5~~)	127 (281)	322 (710)	N/A	N/A
~~Total Nickel~~	~~Report~~ ~~0.45(1.0)~~	~~Report~~ ~~0.91(2.0)~~	~~42 (mg/l)~~ N/A	~~106 (mg/l)~~ N/A

Effluent Characteristic	Monitoring Requirements Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	Continuous	Record
Total Chromium	1/Week	24-Hour Composite
Total Zinc	1/Week	24-Hour Composite
Total ~~Biochemical~~ Oxygen Demand (~~BOD5~~)	1/Week	24-Hour Composite
~~Total Nickel~~	~~1/Week~~	~~24-Hour Composite~~

~~* lbs/day at CBOD; See Part III for concentration requirements~~
** Flow only required for Outfall 821 via daily estimate.

Monitoring required during cooling tower cleaning only. See Part III. 11.

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/week via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 811, rainfall runoff, cooling tower blowdown and other utility wastewater at old sample point 008. Outfall 821, water softener stream to effluent canal adjacent to Outfall 811.

PART I
REQUIREMENTS FOR NPDES PERMITS

Internal

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - (Outfall(s) 911 and 931*.

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 911, stormwater and process wastewater from the manufacture of high density polyethylene, 931 stormwater runoff. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day) Daily Avg	Daily Max	Other Units (specify) Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
Biochemical Oxygen Demand (BOD_5)	14(30)	(57)	N/A	N/A
~~Chemical Oxygen Demand (COD)~~	~~136(300)~~	~~259(570)~~	~~N/A~~	~~N/A~~
Total Suspended Solids (TSS)	39(85)	62(136)	N/A	N/A

Effluent Characteristic	Monitoring Requirements Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	~~Continuous~~ when sampled	Estimate
Biochemnical Oxygen Demand (BOD_5)	~~1/Month~~ **	24-Hour Composite
~~Chemical Oxygen Demand (COD)~~	~~1/Month~~	~~24-Hour Composite~~
Total Suspended Solids (TSS)	~~2/Week~~ **	24-Hour Composite

* 931 - See stormwater requirements in Part III. 10.

** Process wastewater and storm runoff may be discharged at internal outfalls 911 and 931 without a monitoring schedule provided: 1) the discharge is free of floating solids or other than trace amounts, and 2) it does not exceed its discharge limitations. Any monitoring by the permittee for these parameters shall be reported on the monthly Discharge Monitoring Reports.

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored ~~2/week via grab sample.~~ N/A

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 911 process wastewater, ~~at the exit of settling pond at the "old" 009 outfall.~~
Stormwater runoff and CTBD at the southwest corner of area 900, 931, stormwater runoff and process area washdown

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Internal Outfall(s) 921, 931 and 941.

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from Outfall(s) serial number(s) 921, noncontact cooling water; ~~931, essentially noncontact cooling water; 941,~~ noncontact cooling water.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day(lbs/day) Daily Avg	Daily Max	Other Units (specify) Daily Avg	Daily Max
Flow-m^3/Day(MGD)	N/A	N/A	Report	Report
~~Net Total Oxygen Demand~~	~~N/A~~	~~N/A~~	~~N/A~~	~~5(mg/l)~~

Effluent Characteristic	Monitoring Requirements Measurement Frequency	Sample Type
Flow-m^3/Day(MGD)	~~Continuous~~ 1/month	Estimate
~~Net Total Oxygen Demand~~	~~1/Day~~	~~Grab~~

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored 1/day via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 921, noncontact cooling prior to entering effluent canal; ~~931, noncontact cooling water, noncontact condensate and CTDD prior to entering effluent canal at "old" 009A; 941, noncontact cooling water prior to entering effluent canal at "old" 009B monitoring point.~~ at the old 009B monitoring point.